

Claim Listing

1-13.(cancelled)

14.(previously presented) A semiconductor die package, comprising a semiconductor die and a permanent protective material surrounding substantially all of the die, the protective material fully curable by exposure to ultraviolet light and shrinking 10% or less by volume upon curing.

15.(previously presented) A semiconductor die package, comprising:
a semiconductor die;
conductive leads electrically connected to the die; and
protective material covering substantially all of the die and at least a portion of the leads, the protective material fully curable by exposure to ultraviolet light and shrinking 10% or less by volume upon curing.

16.(previously presented) The semiconductor die package of Claim 15, wherein the protective material is formed from a mixture including a polymer resin and a photoactive compound.

17.(previously presented) The semiconductor die package of Claim 16, wherein the polymer resin comprises a phenol-formaldehyde epoxy novolac resin and the photoactive compound comprises triaryl sulfonium hexafluorophosphate.

18.(previously presented) The semiconductor die package of Claim 17, wherein the protective material is formed from a mixture including about 44% by volume phenol-formaldehyde epoxy novolac resin and about 1% by volume triaryl sulfonium hexafluorophosphate.

19.(previously presented) A method, comprising:
coating substantially all of a semiconductor die with a polymer that is fully curable by exposure to ultraviolet light and shrinks 10% or less by volume upon curing;
and
exposing the coating to ultraviolet light.

20.(canceled)

21.(previously presented) A method, comprising:
coating substantially all of a semiconductor die with a mixture of a phenol-formaldehyde epoxy novolac resin and triaryl sulfonium hexafluorophosphate; and
exposing the coating to ultraviolet light.

22.(previously presented) The method of Claim 21, wherein coating comprises coating the semiconductor die with a mixture of about 44% by volume phenol-formaldehyde epoxy novolac resin and about 1% by volume triaryl sulfonium hexafluorophosphate.

23.(withdrawn) A semiconductor device, comprising:
a main region for integrated circuits;
an insulating layer over the main region;
wires on the insulating layer;
a passivation layer covering the wires and the insulating layer, the passivation layer having openings therein exposing select areas of the wires and the passivation layer comprising a composite of silicon dioxide, silicon nitride and a polymer that is fully curable through exposure to ultraviolet light and shrinks 10% or less by volume upon curing.

24.(withdrawn) The semiconductor device of Claim 23, wherein the polymer is formed from a mixture including a polymer resin and a photoactive compound.

25.(withdrawn) The semiconductor device of Claim 24, wherein the polymer resin comprises a phenol-formaldehyde epoxy novolac resin and the photoactive compound comprises triaryl sulfonium hexafluorophosphate.